

## **REMARKS**

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Claims 26-28, 36, 37, 40, and 41 are currently being amended. No new matter has been added. Claims 21, 25-28, and 31-43 remain pending in this application.

### **I. Claim Rejections Under 35 U.S.C. § 103**

On page 2 of the Final Office Action, Claims 21, 25-28, 31-40, and 43 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,082,107 to Arvelo (hereinafter “Arvelo”), in view of U.S. Patent Application Publication No. 2006/0182030 to Harris et al. (hereinafter “Harris”) or U.S. Patent Application Publication No. 2004/0015765 to Cooper et al. (hereinafter “Cooper”). Applicants respectfully traverse the rejection.

Independent Claim 21 recites, in part, “responsive to the first error rate exceeding the threshold error rate, transmitting the plurality of packets at a second output power, wherein the second output power is less than the first output power” (emphasis added). Although different in scope, independent Claims 26, 36, 40, and 43 recite similar elements. Applicants respectfully submit that Arvelo, Harris, and Cooper, alone or in any proper combination, fail to disclose, teach, or suggest such elements.

On page 3 of the Office Action the Examiner stated that Arvelo teaches:

responsive to the first error rate exceeding the threshold error rate, transmitting the plurality of packets at a second output power, wherein the second output power is less than the first output power (abstract, figures 1 and 3, col. 3 lines 12-33, col. 3 line 40 – col. 4 line 65, col. 5 lines 21-61, col. 7 lines 4-11, col. 7 lines 30-52, col. 10 lines 37-46).

Applicants respectfully disagree. Column 3, line 63 to column 4, line 5 and column 4, lines 16-31 of Arvelo states (with emphasis added):

FIG. 1 demonstrates one embodiment of the present invention. In block 110, counters and registers are reset. In block 120, the process counts the number of packet errors in the short observation window and compares that number of packets to a first threshold. If the number of packet errors is greater than or equal to the first threshold, the packet error rate is higher than desired, indicating that the transmission power level is too low. In which case, the process proceeds to block 170 to increase the power. From block 170, the process returns to block 110 to reset and start over again.

...

Assuming the first threshold is not reached or exceeded in any contiguous set of packets in the short window, the process loops through blocks 120 and 130 until enough packets accumulate to fill the long observation window. Once the long observation window is filled in block 130, the number of packet errors accumulated during the long observation window is compared to a second threshold in block 140.

If the number of errors in the long window is too small, then the power level is higher than necessary. In other words, if the number of packet errors in the long observation window is less than or equal to the second threshold, the packet error rate has fallen below the desired rate and the signal quality is higher than desired. In which case, the process proceeds to decrease the power in block 160 and reset and restart the process in block 110.

Accordingly, Arvelo discloses that, in a first operation, a number of packet errors is compared to a first threshold, and, if the number of packet errors is greater than or equal to the first threshold, the transmission power is increased. Arvelo further discloses that if the first threshold is not exceeded, the number of packet errors is compared to a second threshold, and, if the number of packet error is less than or equal to the second threshold, the transmission power is decreased. In contrast, Claim 21 recites “responsive to the first error rate exceeding the threshold error rate, transmitting the plurality of packets at a second output power, wherein the second output power is less than the first output power.” Arvelo thus discloses modifying the transmission power in the opposite manner of Claim 21. Namely, Arvelo discloses increasing the transmission power when a first threshold is met or exceeded and decreasing the transmission power when a second threshold is not met or exceeded.

In the Advisory Action dated July 12, 2010, the Examiner stated (with emphasis added):

It appears that Applicants invention starts out with high power and when the PER exceeds a threshold, the Tx power is reduced. Whereas, Arvelo starts out at a lower Tx power and when the PER exceeds threshold, the Tx power is increased. The Examiner notes that using different threshold values is not novel.

Accordingly, in asserting that Arvelo discloses that the “Tx power is increased” as opposed to being “reduced” (as the Examiner asserted the Applicants’ invention teaches), the Examiner appeared to acknowledge that Arvelo does not disclose “responsive to the first error rate exceeding the threshold error rate, transmitting the plurality of packets at a second output power, wherein the second output power is less than the first output power,” as recited in Claim 21.

However, the Examiner then stated that “using different threshold values is not novel.” Applicants respectfully submit that the Examiner fails to consider the plain language of the claim in assessing its novelty/nonobviousness in view of the applied references. Claim 21 does not recite “using different threshold values.” Instead, as discussed above, Claim 21 recites, in part, “responsive to the first error rate exceeding the threshold error rate, transmitting the plurality of packets at a second output power, wherein the second output power is less than the first output power.” Accordingly, while “using different threshold values” may be disclosed in the prior art, Applicants respectfully submit that the specific manner recited in the independent claims of adjusting the output power in response to an error rate is not disclosed, taught, or suggested by the applied references. Merely because the prior art may teach one manner of adjusting output power in response to an error rate does not mean that the prior art teaches every other possible manner of adjusting the output power.

As such, Applicants respectfully request that the Examiner specifically point out where the applied references disclose that “responsive to the first error rate exceeding the threshold error rate, transmitting the plurality of packets at a second output power, wherein the second output power is less than the first output power,” as recited in Claim 21.

The Examiner does not indicate either in the Final Office Action or the Advisory Action that either Harris or Cooper disclose, teach, or suggest “responsive to the first error rate exceeding the threshold error rate, transmitting the plurality of packets at a second output power, wherein the second output power is less than the first output power,” and indeed they do not. Harris is directed to a “wireless communication system” in which “error targets used in transmission may be adjusted” (Abstract). However, similar to Arvelo, Harris fails to teach that in response to a relatively low packet error rate, the power level may be decreased, i.e., Harris discloses increasing the error rate by decreasing the power. For example, paragraph [0055] of Harris discloses that in response to a switch to a “higher frame error rate target” a lower transmit power level is used because greater error rates can then be tolerated.

In the Advisory Action, the Examiner appeared to assert only that Harris discloses “comparing error rate to determine output power.” However, as discussed above, Applicants respectfully submit that Harris teaches the specific method of adjusting output power as recited in the independent claims, specifically the element “responsive to the first error rate exceeding the threshold error rate, transmitting the plurality of packets at a second output power, wherein the second output power is less than the first output power,” as recited in Claim 21, and as similarly recited in the other independent claims.

Cooper is directed to an “adaptive and dynamic forward error correction scheme for a communication channel” (Abstract). Paragraph [0047] of Cooper states, in part, (with emphasis added):

After the bit error rate is calculated, processing moves to a decision step 207 where the calculated bit error rate is compared with the target bit error rate. If the calculated bit error rate is greater than the target bit error rate, than the forward error correcting power must be increased to reduce the calculated bit error rate. This process to reduce the bit error rate follows the affirmative path leading from the decision step 207. If the calculated bit error rate is less than the target bit error rate, meaning that fewer errors are occurring on the channel than the target number of errors, than the error correcting power can be decreased (following the negative

path from the decision step 207) to allow the calculated bit error rate to increase.

As such, similar to Arvelo, Cooper teaches that power is increased in response to an error rate exceeding a target rate, and decreased in response to an error rate not exceeding the target rate. Cooper thus fails to disclose, teach, or suggest “responsive to the first error rate exceeding the threshold error rate, transmitting the plurality of packets at a second output power, wherein the second output power is less than the first output power,” as recited in Claim 21 (and similar elements recited in Claims 26, 36, 40, and 43).

In the Advisory Action, the Examiner asserted that Cooper teaches increasing and decreasing the power in response to a bit error rate. However, once again, the Examiner fails to indicate that Cooper discloses the specific manner of adjusting the output power as recited in the independent claims. Indeed, in the second half of the last paragraph of page 3 of the Advisory Action, the Examiner appears to acknowledge that Cooper discloses the opposite manner of adjusting output power, as discussed by Applicants above.

For at least the reasons above, Applicants respectfully submit that Arvelo, Harris, and Cooper, alone or in combination, fail to disclose, teach, or suggest at least one element recited in each of independent Claims 21, 26, 36, 40, and 43 (and their associated dependent claims). Applicants therefore request reconsideration and withdrawal of the rejection of Claims 21, 25-28, 31-40, and 43 under 35 U.S.C. § 103(a).

## **II. Allowable Subject Matter**

On page 22 of the Office Action, Claims 41 and 42 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Applicants thank the Examiner for indicating the allowable subject matter. However, as discussed above, Applicants respectfully submit that Claim 40 (from which Claims 41 and 42 ultimately depend) is in condition for allowance. As such, Applicants respectfully request allowance of Claims 41 and 42.

Applicants believe that the present application is now in condition for allowance.  
Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

By   
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